

Amendments to the Claims

Pursuant to 37 C.F.R. § 1.121 (c), the following listing of all claims in the application replaces all previous versions and listings of claims:

1. (Currently amended) A composition for forming a fire resistant material comprising a plurality of expandable beads of a polymeric material, wherein the polymeric material comprises [[5]] polystyrene, said beads being coated with an exfoliable graphite, characterised in that the exfoliable graphite is adhered to the beads with a resin comprising an emulsion comprising a styrene homopolymer, the resin having a solubility parameter of within substantially $0.5(\text{cal cm}^{-3})^{1/2}$ of the solubility parameter of the polymeric material.
2. (Currently amended) A composition according to claim 1 characterised in that the resin comprises an emulsion further comprising one or more of a styrene/acrylic copolymer, ~~a styrene homopolymer, a vinylidene~~ vinylidene vinyl chloride copolymer, and methylphenyl siloxane.
3. (Previously presented) A composition according to claim 1 characterised in that the resin includes a halogenated flame retardant.
4. (Original) A composition according to claim 3 characterised in that the resin includes a synergist comprising an oxide of an element of Group 6B of the Periodic Table.
5. (Previously presented) A composition according to claim 3 characterised in that the halogenated flame retardant comprises a brominated flame retardant.

6. (Previously presented) A composition according to claim 3 characterised in that the flame retardant comprises hexabromocyclododecane.

7. (Previously presented) A composition according to claim 4 characterised in that the synergist comprises tungsten oxide.

8. (Previously presented) A composition according to claim 4 characterised in that the synergist comprises yellow tungsten oxide.

9. (Previously presented) A composition according to claim 1 characterised in that the expandable beads comprise partially expanded polystyrene beads.

10. (Currently amended) A method of forming a fire resistant material comprising:
~~providing a composition according to any preceding claim; and thereafter causing or allowing said beads to expand and fuse together~~

providing partially expanded polystyrene beads;

coating the partially expanded polystyrene beads with exfoliable graphite using, as an adhesive, a resin comprising an emulsion comprising a styrene homopolymer, the resin having a solubility parameter of within substantially $0.5(\text{cal cm}^{-3})^{1/2}$ of the solubility parameter of the polystyrene beads; and

forming the coated partially expanded polystyrene beads into blocks by a final expansion in closed form using steam.

11. (Previously presented) A fire resistant material comprising a composition according to

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claim 1 wherein the beads have been allowed to expand and fuse together.

12. (Previously presented) A fire carrier formed of a fire resistant material according to claim 11 arranged between non-flammable outer skins where the fire resistant material contains sufficient exfoible graphite substantially to fill the cavity between the skins on expansion thereof after melting and loss of within substantially $0.5(\text{cal cm}^{-3})^{1/2}$ of the polymeric material in a fire situation.